

AMENDMENTS TO THE CLAIMS

Claims 1-27 (Canceled)

Claim 28 (Currently Amended): A process for producing a three-dimensional object comprising

- a) providing a layer of a pulverulent substrate comprises a polymer, wherein the polymer is a homo- or copolymer preferably selected from the group consisting of polyester, polyvinyl chloride, polyacetal, polypropylene, polyethylene, polystyrene, polycarbonate, polybutylene terephthalate, polyethylene terephthalate, polysulfone, polyarylene ether, polyurethane, thermoplastic elastomers, polylactides, polyoxyalkylenes, poly(Nmethylmethacrylimides) (PMMI), polymethyl methacrylate (PMMA), ionomer, polyamide, copolyester, copolyamides, silicone polymers, terpolymers, acrylonitrilebutadiene-styrene copolymers (ABS), and mixtures thereof
- b) controlling the temperature of a manufacturing chamber by supplying heat to said layer to bring said layer to an elevated temperature or to maintain said layer at an elevated temperature below the melting or sintering temperature of the polymer in said pulverulent substrate
- c) selectively applying an absorber in a suspension or a liquid absorber via an inkjet process to a region to be sintered
- d) applying other specific liquids or suspensions with certain properties
- e) selectively melting regions of the layer of the pulverulent substrate by introducing electromagnetic energy via a laser of wavelength from 100 to 3000 nm
- f) cooling the molten and non-molten regions to a temperature which allows the moldings to be removed intact
- g) removing the moldings.

Claim 29 (Previously Presented): The process as claimed in claim 28, wherein e) is first carried out once, and then a) to d) are carried out once, and then b) is carried out and a) is carried out again once, and then the other steps are carried out in the sequence c), d), a), b), and e).

Claim 30 (Previously Presented): The process as claimed in claim 28, wherein the pulverulent substrate used has a median grain size of from 10 to 150 μm .

Claim 31 (Previously Presented): The process as claimed in claim 28, wherein said laser has a wavelength from 800 to 1070 nm.

Claim 32 (Previously Presented): The process as claimed in claim 28, wherein said laser has a wavelength from 1900 to 2100 nm.

Claim 33 (Previously Presented): The process as claimed in claim 28, wherein said laser is an Nd:YAG laser.

Claim 34 (Previously Presented): The process as claimed in claim 28, wherein said laser is a diode laser.

Claim 35 (Previously Presented): The process as claimed in claim 28, wherein said laser is a laser with unfocused, linear or spread beam.

Claim 36 (Previously Presented): The process as claimed in claim 28, wherein the absorber comprises colorants.

Claim 37 (Previously Presented): The process as claimed in claim 36, wherein the absorber comprises pigments.

Claim 38 (Previously Presented): The process as claimed in claim 36, wherein the absorber comprises dyes.

Claim 39 (Previously Presented): The process as claimed in claim 28, wherein the absorber comprises carbon black, CHP, animal charcoal, graphite, carbon fibers, chalk, or interference pigments.

Claim 40 (Previously Presented): The process as claimed in claim 28, wherein the absorber comprises other components alongside carbon black, CHP, animal charcoal, graphite, carbon fibers, chalk, or interference pigments.

Claim 41 (Previously Presented): The process as claimed in claim 28, wherein the absorber comprises flame retardants based on phosphorus or melamine cyanurate.

Claim 42 (Previously Presented): The process as claimed in claim 36, wherein the absorber also comprises distilled water, or alcohol, or solvent.

Claim 43 (Previously Presented): The process as claimed in claim 36, wherein the absorber also comprises a surfactant and/or wetting agent and/or biocide and/or moisture retainer.

Claim 44: (Canceled)

Claim 45 (Currently Amended): The process as claimed in claim 28, wherein said pulverulent substrate further comprises sand, metal particles, or ceramic particles, which have been encapsulated by a polymeric material.

Claim 46 (Canceled):

Claim 47 (Currently Amended): The process as claimed in claim 28, wherein said pulverulent substrate further comprises from 0.05 to 5% by weight of a powder-flow aid.

Claim 48 (Currently Amended): The process as claimed in claim 28, wherein said pulverulent substrate further comprises inorganic fillers.

Claim 49 (Previously Presented): The process as claimed in claim 28, wherein the filler comprises glass beads.

Claim 50 (Currently Amended): The process as claimed in claim 28, wherein said pulverulent substrate further comprises inorganic or organic pigments.